AMENDMENT NO. 1 DATED JULY 12, 2023 To Prospectus Supplement dated April 9, 2021 and Prospectus dated April 9, 2021



Up to \$65,000,000

Common Stock

This Amendment No. 1 to Prospectus Supplement, or this amendment, amends our prospectus supplement dated April 9, 2021, or the prospectus supplement. This amendment should be read in conjunction with the prospectus supplement and the accompanying prospectus dated April 9, 2021, each of which are to be delivered with this amendment. This amendment amends only those sections of the prospectus supplement listed in this amendment; all other sections of the prospectus supplement remain as is.

On March 31, 2021, we entered into an Equity Distribution Agreement, or the Distribution Agreement, with Canaccord Genuity LLC, or Canaccord, relating to the offer and sale of shares of our common stock offered by the prospectus supplement. We are filing this amendment to amend the prospectus supplement to increase the maximum amount of shares that we may sell pursuant to the Distribution Agreement. The prospectus supplement authorized us to offer and sell common stock having an aggregate offering price of up to \$75,000,000. As of the date of this amendment, we have sold shares of our common stock pursuant to the distribution agreement for gross proceeds of \$71,331,251. This amendment is increasing the dollar amount of shares available to be sold under this amendment to \$65,000,000, from and including the date hereof. Until such time as the total number of our authorized shares are increased or our total number of shares outstanding decrease, we will not issue and sell more than an aggregate of 89,055,008 shares.

Our common stock trades on the Nasdaq Global Market, or the Exchange, under the symbol "TTOO." On July 10, 2023, the last reported sale price of our common stock on the Exchange was \$0.158 per share.

Sales of our common stock, if any, under the prospectus supplement, as amended by this amendment, may be made by any method permitted that is deemed an "at the market offering" as defined in Rule 415(a)(4) promulgated under the Securities Act of 1933, as amended, or the Securities Act. Canaccord is not required to sell any specific number or dollar amount, but will act as a sales agent using commercially reasonable efforts consistent with its normal trading and sales practices, on mutually agreed terms between Canaccord and us. There is no arrangement for funds to be received in any escrow, trust or similar arrangement.

The compensation to Canaccord for sales of common stock sold pursuant to the Distribution Agreement will be an amount equal to 3.0% of the gross proceeds of any shares of common stock sold under the Distribution Agreement. In connection with the sale of the common stock on our behalf, Canaccord will be deemed to be an "underwriter" within the meaning of the Securities Act and the compensation of Canaccord will be deemed to be underwriting commissions or discounts. We have also agreed to provide indemnification and contribution to Canaccord with respect to certain liabilities, including liabilities under the Securities Act or the Exchange Act of 1934, as amended, or the Exchange Act.

Investing in our securities involves a high degree of risk. You should review carefully the risks and uncertainties described under the heading "Risk Factors" on page S-3 of this amendment and under similar headings in the prospectus supplement dated April 9, 2021 and other documents that are incorporated by reference into this amendment, the prospectus supplement and the accompanying prospectus.

NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED OF THESE SECURITIES OR DETERMINED IF THIS AMENDMENT, THE PROSPECTUS SUPPLEMENT AND THE ACCOMPANYING PROSPECTUS ARE TRUTHFUL OR COMPLETE. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

Canaccord Genuity

The date of this Amendment No. 1 to Prospectus Supplement is July 12, 2023.

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ABOUT THIS AMENDMENT TO PROSPECTUS SUPPLEMENT

The prospectus supplement is part of a registration statement that we have filed with the Securities and Exchange Commission, or the SEC, utilizing a "shelf" registration process. Under the shelf registration process, we may offer shares of our common stock having an aggregate offering price of up to \$150,000,000. Under the prospectus supplement, as amended by this amendment, we may offer shares of our common stock having an aggregate offering price of up to \$65,000,000 from time to time at prices and on terms to be determined by market conditions at the time of offering (which amount excludes shares we have already sold pursuant to the prospectus supplement prior to the date of this amendment).

Before buying any of the common stock that we are offering, we urge you to carefully read this amendment, the prospectus supplement and the accompanying prospectus, together with the information incorporated by reference into this amendment, the prospectus supplement and the accompanying prospectus, and any free writing prospectus that we have authorized for use in connection with this offering when making your investment decision. You should also read and consider the information in the documents we have referred you to in the prospectus supplement under the headings "Where You Can Find More Information" and "Incorporation of Certain Information by Reference." These documents contain important information that you should consider when making your investment decision.

The prospectus supplement, as amended by this amendment, describes the terms of this offering of common stock and also adds to and updates information contained in the documents incorporated by reference into the prospectus supplement and the accompanying prospectus. To the extent there is a conflict between the information contained in this amendment or the prospectus supplement, on the one hand, and the information contained in any document incorporated by reference into the prospectus supplement and the accompanying prospectus that was filed with the SEC before the date of this amendment or the prospectus supplement, on the other hand, you should rely on the information in this amendment or the prospectus supplement, as applicable. If any statement in one of these documents is inconsistent with a statement in another document having a later date — for example, a document incorporated by reference into the prospectus supplement — the statement in the document having the later date modifies or supersedes the earlier statement.

You should rely only on the information contained in or incorporated by reference in this amendment, the prospectus supplement and the accompanying prospectus, and any free writing prospectus that we have authorized for use in connection with this offering. We have not, and the sales agent has not, authorized anyone to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. We are not, and the sales agent is not, making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted.

You should assume that the information appearing in this amendment. the prospectus supplement, the documents incorporated by reference in the prospectus supplement and the accompanying prospectus, and any free writing prospectus that we have authorized for use in connection with this offering, is accurate only as of the date of those respective documents. Our business, financial condition, results of operations and prospects may have changed since those dates. You should read this amendment, the prospectus supplement, the accompanying prospectus and the documents incorporated by reference herein and therein, and any free writing prospectus that we have authorized for use in connection with this offering, in their entirety before making an investment decision.

Unless otherwise mentioned or unless the context requires otherwise, all references in this amendment and the prospectus supplement to "T2 Biosystems," "we," "our," "us" and the "Company" mean T2 Biosystems, Inc. and its consolidated subsidiaries, unless otherwise specified.

This amendment, the prospectus supplement, the accompanying prospectus and the information incorporated by reference herein and therein include trademarks, service marks and trade names owned by us or other companies. All trademarks, service marks and trade names included or incorporated by reference into the prospectus supplement and the accompanying prospectus are the property of their respective owners.

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THE OFFERING

The following summary is qualified in its entirety by, and should be read together with, the more detailed information and financial statements and related notes thereto appearing elsewhere or incorporated by reference in this amendment, the prospectus supplement and the accompanying prospectus. Before you decide to invest in our common stock, you should read this entire amendment, the prospectus supplement and the accompanying prospectus carefully, including the risk factors and the financial statements and related notes included or incorporated by reference in, the prospectus supplement and the accompanying prospectus.

Common stock offered by us	Shares of our common stock having an aggregate offering price of up to \$65.0 million, which excludes sales of common stock under the Distribution Agreement prior to the date of this amendment. Until such time as the total number of our authorized shares are increased or our total number of shares outstanding decrease, we will not issue and sell more than aggregate of 89,055,008 shares.
Plan of Distribution	"At the market offering" that may be made from time to time through our sales agent, Canaccord. See "Plan of Distribution" on page S-4 of this amendment.
Use of Proceeds	We currently intend to use the net proceeds from this offering for working capital and other general corporate purposes. See "Use of Proceeds" on page S-7 of the prospectus supplement.
Risk Factors	Investing in our common stock involves a high degree of risk. See "Risk Factors" on page S-2 of this amendment and page S-5 of the prospectus supplement, and under similar headings in other documents incorporated by reference into this amendment, prospectus supplement and the accompanying prospectus.
Nasdaq Global Market symbol	"TTOO"
Shares Outstanding	As of July 7, 2023, we had (i) 290,195,720 shares of common stock outstanding and (ii) shares of Series B convertible preferred shares outstanding that will be convertible into 93,297,260 shares of common stock following our stockholders approval of a reverse split.

As of March 31, 2023, we had 20,368,463 shares of common stock, which excludes:

- 19,942,949 shares of common stock issuable upon the exercise of warrants outstanding as of March 31, 2023, having a weighted average exercise price of \$0.86 per share;
- 167,446 shares of common stock issuable upon the exercise of stock options outstanding as of March 31, 2023, having a weighted average exercise price of \$142.28 per share;
- 469,952 shares of common stock issuable upon the vesting of restricted stock units outstanding as of March 31, 2023;
- an aggregate of 168,925 shares of common stock reserved for future issuance under our equity incentive and employee stock purchase plans as of March 31, 2023;
- 214,606,459 shares of common stock issued between March 31, 2023 and the date of this amendment pursuant to the distribution agreement; and

• 48,345,798 shares of common stock and Series B preferred shares convertible into 93,297,260 shares of common stock that were issued on July 3, 2023 in connection with the conversion of approximately \$10.0 million of debt into equity.

To the extent that outstanding options, warrants or convertible preferred shares outstanding as of March 31, 2023 have been or may be exercised or other shares issued, investors purchasing our common stock in this offering may experience further dilution. In addition, we may choose to raise additional capital due to market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. To the extent that additional capital is raised through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our stockholders.

RISK FACTORS

Investing in our securities involves a high degree of risk. You should carefully review the risks and uncertainties described below and under the section titled "Risk Factors" in the prospectus supplement and our Annual Report on Form 10-K for the year ended December 31, 2022, as updated by our annual, quarterly and other reports and documents that are incorporated by reference into this amendment, the prospectus supplement and the accompanying prospectus and any free writing prospectus with respect to this offering filed by us with the SEC, before deciding whether to invest in our common stock. Each of the risk factors could adversely affect our business, operating results and financial condition, as well as adversely affect the value of an investment in our securities, and the occurrence of any of these risks might cause you to lose all or part of your investment. Additional risks not presently known to us or that we currently believe are immaterial may also significantly impair our business operations.

Additional Risks Related to This Offering

You may experience dilution.

The offering price per share in this offering may exceed the net tangible book value per share of our common stock outstanding prior to this offering. The exercise of outstanding stock options and warrants, or the conversion of our outstanding Series B convertible preferred stock, would result in further dilution of your investment. See the section entitled "Dilution" below for a more detailed illustration of the dilution you would incur if you participate in this offering. Because the sales of the shares offered hereby will be made directly into the market or in negotiated transactions, the prices at which we sell these shares will vary and these variations may be significant. Purchasers of the shares we sell, as well as our existing shareholders, will experience significant dilution if we sell shares at prices significantly below the price at which they invested.

If we raise additional capital in the future, your ownership in us could be diluted.

Any issuance of equity we may undertake in the future to raise additional capital could cause the price of our common stock to decline, or require us to issue shares at a price that is lower than that paid by holders of our common stock in the past, which would result in those newly issued shares being dilutive. If we obtain funds through a credit facility or through the issuance of debt or preferred securities, these securities would likely have rights senior to your rights as a common stockholder, which could impair the value of our common stock.

Our failure to meet the continued listing requirements of The Nasdaq Capital Market could result in a delisting of our common stock.

If we fail to regain or maintain compliance with the continued listing requirements of The Nasdaq Capital Market, Nasdaq may delist our common stock.

On November 22, 2022, we received a letter from The Nasdaq Stock Market LLC ("Nasdaq") indicating that, for the last thirty consecutive business days, the Market Value of Listed Securities, as defined by Nasdaq ("MVLS") had been below the \$35 million minimum requirement for continued listing on The Nasdaq Capital Market under Nasdaq Listing Rule 5550(b)(2). In accordance with Nasdaq Listing Rule 5810(c)(3)(C), we were provided an initial period of 180 calendar days, or until May 22, 2023, to regain compliance. On May 23, 2023 we received a letter from Nasdaq informing us that our shares had failed to comply with the MVLS required for continued listing on The Nasdaq Capital Market and, as a result, our shares are subject to delisting. We filed an appeal and hearing request with Nasdaq requesting an extension of time, as discussed further below.

On March 30, 2023, the Company received a letter from Nasdaq indicating that, for the last thirty consecutive business days, the bid price for the Company's common stock had closed below the minimum \$1.00 per share requirement for continued listing on The Nasdaq Capital Market under Nasdaq Listing Rule 5550(a)(2). In accordance with Nasdaq Listing Rule 5810(c)(3)(A), we were provided an initial period of 180 calendar days, or until September 26, 2023, to regain compliance. The letter stated that the Nasdaq staff will provide written

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notification that the Company has achieved compliance with Rule 5550(a)(2) if at any time before September 26, 2023, the bid price of the Company's common stock closes at \$1.00 per share or more for a minimum of ten consecutive business days.

On June 20, 2023, we received a letter Nasdaq indicating that, for the last ten consecutive business days, the bid price for the Company's common stock had closed below the minimum \$0.10 per share requirement for continued listing on The Nasdaq Capital Market under Nasdaq Listing Rule 5810(c)(3)(A)(iii) (the "Low Priced Stock Rule").

We filed an appeal and hearing request with Nasdaq requesting an extension of time within which to evidence compliance with all applicable requirements for continued listing, which has stayed the delisting of our common stock from The Nasdaq Capital Market pending a Nasdaq listing qualifications hearings panel's (the "Panel") decision. The hearing occurred on July 6, 2023. There can be no assurance that the Panel will grant our request for an extension of time within which to evidence compliance with all applicable requirements for continued listing; however, we submitted a plan to the Panel to regain compliance with the MVLS and the Low Priced Stock Rule that includes a discussion of the events that we believe will enable us to regain compliance, including a potential reverse stock split, if necessary.

The delisting of our common stock from Nasdaq may make it more difficult for us to raise capital on favorable terms in the future. Such a delisting would likely have a negative effect on the price of our common stock and would impair your ability to sell or purchase our common stock when you wish to do so. Further, if we were to be delisted from Nasdaq, our common stock would cease to be recognized as covered securities and we would be subject to regulation in each state in which we offer our securities. Moreover, there is no assurance that any actions that we take to restore our compliance with the minimum bid price requirement would stabilize the market price or improve the liquidity of our common stock, prevent our common stock from falling below the minimum bid price required for continued listing again, or prevent future non-compliance with Nasdaq's listing requirements.

There is substantial doubt about our ability to continue as a going concern.

As of June 30, 2023, we had \$16.1 million in cash and cash equivalents which, without additional funding, will not be sufficient to meet our obligations within the next twelve months from the date hereof. As substantial doubt about our ability to continue as a going concern exists, our ability to finance our operations through equity financings or otherwise could be impaired. Our ability to fund working capital, make capital expenditures, and service our debt depends on our ability to generate cash from operating activities, which is subject to its future operating success, and obtain financing on reasonable terms, which is subject to factors beyond our control, including general economic, political, and financial market conditions. The capital markets have in the past experienced, are currently experiencing, and may in the future experience, periods of upheaval that could impact the availability and cost of financing and there can be no assurances that such financing will be available to the Company on satisfactory terms, or at all. Management continues to explore raising additional capital through equity financing to supplement the Company's capitalization and liquidity, but there can be no assurance that such financing will be available to the Company, or at all. If we are unsuccessful in our operations to restructure and secure new financing, or if such incremental financing is not sufficient to fund our operations for the foreseeable future, we may be forced to sell material assets or need to commence proceedings under Chapter 11 of the U.S. Bankruptcy Code, which would harm our business, financial condition, and results of operations.

DILUTION

Our net tangible book value as of March 31, 2023 was approximately \$(49.9) million, or \$(2.449) per share, based on 20,368,463 shares outstanding as of March 31, 2023. Net tangible book value per share is determined by dividing our total tangible assets, less total liabilities, by the number of shares of our common stock outstanding. Dilution with respect to net tangible book value per share represents the difference between the amount per share paid by purchasers of shares of common stock in this offering and the net tangible book value per share of our common stock immediately after this offering.

After giving effect to the sale of 411,392,405 shares of our common stock at an assumed offering price of \$0.158 (the last reported sale price of our common stock on the Exchange on July 10, 2023), and after deducting estimated offering commissions and offering expenses payable by us, our as adjusted net tangible book value as of March 31, 2032 would have been approximately \$13.0 million, or \$0.030 per share. This represents an immediate increase in net tangible book value of \$2.479 per share to existing stockholders and immediate dilution of \$0.128 per share to investors purchasing our common stock in this offering at the public offering price. The following table illustrates this dilution on a per share basis:

Assumed public offering price per share		\$0.158
Net tangible book value per share of as March 31, 2023	\$(2.449)	
Increase in net tangible book value per share attributable to this offering	\$ 2.479	
As adjusted net tangible book value per share after giving effect to this offering		\$0.030
Dilution per share to investors purchasing our common stock in this offering		\$0.128

The table above assumes for illustrative purposes that an aggregate of 411,392,405 shares of our common stock are sold during the term of the Distribution Agreement with Canaccord at a price of \$0.158 per share, the last reported sale price of our common stock on the Exchange on July 10, 2023, for aggregate gross proceeds of \$65.0 million. The shares subject to the Distribution Agreement with Canaccord will be sold from time to time at various prices.

The above discussion and table are based on 20,368,463 shares outstanding as of March 31, 2023, and exclude:

- 19,942,949 shares of common stock issuable upon the exercise of warrants outstanding as of March 31, 2023, having a weighted average exercise price of \$0.86 per share;
- 167,446 shares of common stock issuable upon the exercise of stock options outstanding as of March 31, 2023, having a weighted average exercise price of \$142.28 per share;
- 469,952 shares of common stock issuable upon the vesting of restricted stock units outstanding as of March 31, 2023;
- an aggregate of 168,925 shares of common stock reserved for future issuance under our equity incentive and employee stock purchase plans as of March 31, 2023;
- 214,606,459 shares of common stock issued between March 31, 2023 and the date of this amendment pursuant to the distribution agreement; and
- 48,345,798 shares of common stock and Series B preferred shares convertible into 93,297,260 shares of common stock that were issued on July 3, 2023 in connection with the conversion of approximately \$10 million of debt into equity.

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To the extent that outstanding options, warrants or convertible preferred shares outstanding as of March 31, 2023 have been or may be exercised or other shares issued, investors purchasing our common stock in this offering may experience further dilution. In addition, we may choose to raise additional capital due to market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. To the extent that additional capital is raised through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our stockholders.

PLAN OF DISTRIBUTION

We previously entered into the Distribution Agreement with Canaccord under which we may issue and sell shares of our common stock from time to time through Canaccord acting as sales agent. A copy of the Distribution Agreement was filed with the SEC as an exhibit to the registration statement of which the prospectus supplement and this amendment is a part. Under this amendment, we may issue and sell shares of our common stock having an aggregate gross sales price of up to \$65.0 million.

Upon delivery of a placement notice and subject to the terms and conditions of the distribution agreement, Canaccord may sell our common stock by any method permitted by law deemed to be an "at the market offering" as defined in Rule 415(a)(4) promulgated under the Securities Act, including sales made directly on The Nasdaq Global Market or any other existing trading market of our common stock. We may instruct Canaccord not to sell common stock if the sales cannot be effected at or above the price designated by us from time to time. We or Canaccord may suspend the offering of common stock upon notice and subject to other conditions.

We will pay Canaccord commissions, in cash, for its services in acting as sales agent in the sale of our common stock. Canaccord will be entitled to compensation at a fixed commission rate equal to 3.0% of the gross sales price per share sold pursuant to the Distribution Agreement. Because there is no minimum offering amount required as a condition to close this offering, the actual total public offering amount, commissions and proceeds to us, if any, are not determinable at this time. We previously agreed to reimburse Canaccord for certain specified expenses, including the fees and disbursements of its legal counsel, in an amount up to \$50,000, plus up to an additional \$10,000 for each quarterly bring-down thereafter. We estimate that the total expenses for the offering, excluding compensation and reimbursement payable to Canaccord under the terms of the Distribution Agreement, will be approximately \$0.4 million.

Settlement for sales of common stock will generally occur on the second business day following the date on which any sales are made, or on some other date that is agreed upon by us and Canaccord in connection with a particular transaction, in return for payment of the net proceeds to us. Sales of our common stock as contemplated in this amendment will be settled through the facilities of The Depository Trust Company or by such other means as we and Canaccord may agree upon. There is no arrangement for funds to be received in an escrow, trust or similar arrangement.

Canaccord will use its commercially reasonable efforts, consistent with its sales and trading practices, to solicit offers to purchase shares of our common stock under the terms and subject to the conditions set forth in the Distribution Agreement. In connection with the sale of the common stock on our behalf, Canaccord will be deemed to be an "underwriter" within the meaning of the Securities Act and the compensation of Canaccord will be deemed to be underwriting commissions or discounts. We have agreed to provide indemnification and contribution to Canaccord against certain civil liabilities, including liabilities under the Securities Act.

The offering of our common stock pursuant to the Distribution Agreement will terminate upon the termination of the Distribution Agreement or as otherwise permitted therein. We and Canaccord may each terminate the Distribution Agreement at any time upon ten days' prior notice.

Our common stock is listed on the Nasdaq Global Market and trades under the symbol "TTOO." The transfer agent of our common stock is American Stock Transfer & Trust Company, LLC.

Canaccord and its affiliates have provided, and may in the future provide, various investment banking, commercial banking and other financial services for us and our affiliates, for which services they have received, or may in the future receive, customary fees. To the extent required by Regulation M promulgated under the Exchange Act, Canaccord will not engage in any market making activities involving our common stock while the offering is ongoing under this amendment.

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This amendment, the prospectus supplement and the accompanying base prospectus in electronic format may be made available on a website maintained by Canaccord and Canaccord may distribute this amendment, the prospectus supplement and the accompanying base prospectus electronically.

LEGAL MATTERS

The validity of the common stock offered by this amendment and the prospectus supplement will be passed upon by Latham & Watkins LLP. Canaccord Genuity LLC is being represented in connection with this offering by Cooley LLP, New York, New York.